

ABSTRACT OF DISCLOSURE

A block-constrained Trellis coded quantization (TCQ) method and a method and apparatus for quantizing line spectral frequency (LSF) parameters employing the same in a speech coding system wherein the LSF coefficient quantizing method includes: removing the direct current (DC) component in an input LSF coefficient vector; generating a first prediction error vector by performing inter-frame and intra-frame prediction for the LSF coefficient vector, in which the DC component is removed, quantizing the first prediction error vector by using the BC-TCQ algorithm, and by performing intra-frame and inter-frame prediction compensation, generating a quantized first LSF coefficient vector; generating a second prediction error vector by performing intra-frame prediction for the LSF coefficient vector, in which the DC component is removed, quantizing the second prediction error vector by using the BC-TCQ algorithm, and then, by performing intra-frame prediction compensation, generating a quantized second LSF coefficient vector; and selectively outputting a vector having a shorter Euclidian distance to the input LSF coefficient vector between the generated quantized first and second LSF coefficient vectors.